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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/063,559	05/02/2002	David C. Kulp	3291.7	9768

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EXAMINER
SMITH, CAROLYN L

ART UNIT	PAPER NUMBER
1631	

DATE MAILED: 03/18/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 10/03)

<table>
<tr><td rowspan="3">Office Action Summary</td><td>Application No.
10/063,559</td><td>Applicant(s)
KULP ET AL.</td></tr>
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Carolyn L Smith</td><td>Art Unit
1631</td></tr>
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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>27 December 2004</u>.

2a)☒ This action is **FINAL**.   2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) <u>19,49-51,61,62,64 and 65</u> is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) <u>19,49-51,61,62,64 and 65</u> is/are rejected.

7)☒ Claim(s) <u>49-51,62,64 and 65</u> is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on <u>11/14/02</u> is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All   b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☐ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date <u>122704</u>.

4)☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.

5)☐ Notice of Informal Patent Application (PTO-152)

6)☐ Other: _____.

DETAILED ACTION

Applicants' amendments and remarks, filed 12/27/04, are acknowledged. Amended

claims 19, 49-51, 62, and 64-65 and cancelled claims 1-18, 20-48, 52-60, 63, and 66 are

acknowledged.

Applicants' arguments, filed 12/27/04, have been fully considered but they are not

deemed to be persuasive. Rejections and/or objections not reiterated from the previous office

actions are hereby withdrawn. The following rejections and/or objections are either reiterated or

newly applied. They constitute the complete set presently being applied to the instant

application.

The title of the invention is still not descriptive. A new title is required that is clearly

indicative of the invention to which the claims are directed. The present title is directed to

method, system, and computer software for providing information related to probe sets via a

genomic web portal, whereas in contrast the elected claims are specifically directed to a method

and system. The present claims are not directed to computer software.

The two species elections have been withdrawn as the claims no longer recite these

species.

Claims 19, 49-51, 61-62, and 64-65 are herein under examination.

Claim Objections

Claims 49-51, 62, and 64-65 are objected to because of the following informalities: The

term data is plural such that the verbs "includes" (claim 49, line 14; claim 50, line 2; and claim

62, line 2) and "comprises" (claim 51, line 2; claim 64, line 2; and claim 65, line 2) need to be in

the plural form as well. Appropriate correction is requested. These objections are necessitated

by amendment.

Claims Rejected Under 35 U.S.C. § 112, Second Paragraph

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the
subject matter which the applicant regards as his invention.

Claims 19, 61-62, and 64-65 are rejected under 35 U.S.C. 112, second paragraph, as

being indefinite for failing to particularly point out and distinctly claim the subject matter which

the applicant regards as the invention.

Claim 19 recites the limitation "of the probe set identifiers" in line 4. There is

insufficient antecedent basis for this limitation in the claim as there is no previous mention of

identifiers. Correction is suggested by removing the phrase "of the". Clarification of this issue

is requested. Claims 61-62 and 64-65 are also rejected due to their direct or indirect dependency

from claim 19. This rejection is necessitated by amendment.

Claim Rejections – 35 USC §102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the

basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 19, 49-51, 61-62, and 64-66 are rejected under 35 U.S.C. 102(e)(2) as being

anticipated by Maslyn et al. (P/N 6,408,308).

Maslyn et al. disclose a system and method for generating, analyzing, and storing datasets

from probe sequences (title). Maslyn et al. disclose a manufacturer microarray with

identification of the sites having probes corresponding to a particular transcript (col. 4, lines 49-

52) which represents a probe set that is capable of identification of a biological molecule, as

stated in instant claim 19. Maslyn et al. disclose correlating a particular gene (biological

sequence) or elements on the microarray with the probe design using microarray layout data and

design data files for summarization of data (col. 6, lines 22-28). Figure 9 discloses a user

defined query (530) where selected datasets are retrieved and provided based on user defined

selection (531) followed by comparison (correlation) to other datasets (532/534/536/544/546)

including filters to select specified elements of the dataset such as protein function (542 and col.

12, lines 11-17), ending in a viewing of the data (538). Maslyn et al. disclose a processing

system with procedures and tables that store information identifying element data from

microarrays (abstract) which represents an identification of the probe-set. Maslyn et al. disclose

a microarray manufacturer providing data on the specific transcripts represented on the

microarray and identifying the site or sites having probes corresponding to a particular transcript

(col. 4, lines 49-52) which represents manufacture-defined probe-set identifiers. Maslyn et al.

disclose microarrays generating raw image or expression data and each image data of

hybridization experiments is associated with a unique Image Identifier (col. 7, line 58 to col. 8,

line 3) which represents identifiers identifying probe sets from the results of one or more

experiments performed using biological probe arrays. Maslyn et al. disclose generating data

from a microarray composed of nucleic acid probe sequences representing genes or gene

fragments (biological sequences) (col. 4, lines 40-43) such that each microarray represents a

probe-set as well as a correlation between probe-set identifiers and genes. Maslyn et al. disclose

selecting any combination of query criteria by selecting data across various categories, such as

transcript, microarray (a probe-set), sample, and data source (col. 12, lines 33-38). Figure 10A

discloses query parameters such as a BLAST search (593) (sequence comparison), molecular

function and structural proteins (594) (protein information) (col. 11, lines 39-46 and col. 12, lines

1-2) which represents identification of a biological molecule. Maslyn et al. disclose tables that

store information identifying a microarray technology type and microarray design information

(abstract). Maslyn et al. disclose microarray design information includes location and sequence

information (first data set) of the array elements (col. 2, lines 20-25). Maslyn et al. disclose

providing probes for up to about 10,000 genes (col. 4, lines 52-56). Maslyn et al. disclose

organizing raw expression data with other user-defined data into a format suitable for loading

into the expression database (col. 6, lines 9-12). Maslyn et al. disclose displaying and comparing

data that is stored in external datasets (col. 12, lines 26-31). Figure 1 discloses the use of a

sequence database. Merriam-Webster online dictionary defines domain as "a region distinctively

marked by some physical feature", such that a structural proteins represent protein domain

information, as stated in instant claims 51 and 65. Maslyn et al. disclose a protein function menu

to allow users to select elements (probes) by their associated protein function (col. 1, lines 32-34

and col. 14, lines 34-36) which represents a correlation ("establish a mutual or reciprocal relation

between", definition of correlate according to the Merriam-Webster online dictionary) between

the microarray gene element data with the protein data. Figure 10B demonstrates datasets the

user will define (602) and datasets the user will view (608). Maslyn et al. disclose generating

data from a microarray composed of nucleic acid probe sequences representing genes or gene

fragments (biological sequences) (col. 4, lines 40-43) such that each microarray represents a

probe-set. Maslyn et al. disclose an information processing system storing expression data for

polypeptide sequences (col. 2, lines 36-39). Maslyn et al. disclose a manufacturer microarray

with identification of the sites having probes corresponding to a particular transcript (col. 4, lines

49-52) which represents a probe set that is capable of identification of a biological molecule, as

stated in instant claim 19. Maslyn et al. disclose providing probes for up to about 10,000 genes

(col. 4, lines 52-56). Maslyn et al. disclose correlating a particular gene (biological sequence) or

elements on the microarray with the probe design using microarray layout data and design data

files for summarization of data (col. 6, lines 22-28). Maslyn et al. disclose a network server,

UNIX operating system, application software module, and a relational database management

system (RDBMS) wherein data pass to JAVA classes such that results are displayed to the client

computer (user) (col. 3, lines 39-41 and col. 4, lines 22-26; Figure 1) which represent an output

manager to provide data to user as well as an input manager, determiner, and correlator.

Thus, Maslyn et al. anticipate the limitations in claims 19, 49-51, 61-62, and 64-66. This

rejection is necessitated by amendment.

Applicants summarize the Maslyn et al. reference. Applicants state the reference is

different from the claimed invention that receives a query of user selected probe-set identifiers

and correlates each probe-set identifier with gene or EST data. This difference is found

unpersuasive as the probe-set identifier can be interpreted to be an identifier of a microarray in

the Maslyn et al. reference which is correlated with gene data, as discussed above. Applicants

assert the description of microarray layout data and how layout data is employed is different than

a query received that includes user selection of probe-set identifiers. It is noted that anything

identifying a probe-set, be it a complete microarray or a probe within the microarray, can be

reasonably and broadly interpreted to be a probe-set identifier. Applicants state the microarray

layout data does not include a user selection. This statement is found unpersuasive as seen in

Figures 2 and 10A, a user query is directed selections in several tables including biologicals,

samples, data source, and microarray design which represent a selection of probe-set identifiers.

Applicants discuss comparisons and state that comparing two sets of data to generate a combined

result does not establish a relation between the sets of data. It is noted that not every aspect

described in a reference needs to be exactly the same as the instant invention. But if the claims

read on the reference due to broadly written claims (that is, limitations found in the claims are

also found in the prior art), then a prior art rejection is deemed proper. It is noted that any

relationship between two entities is considered to be a correlation, in the broadest interpretation

of this term. Maslyn et al. specifically disclose passages involving correlations. As stated in the

rejection above:

    Maslyn et al. disclose a manufacturer microarray with identification of the sites having
probes corresponding to a particular transcript (col. 4, lines 49-52) which represents a probe set
that is capable of identification of a biological molecule, as stated in instant claim 19. Maslyn et
al. disclose correlating a particular gene (biological sequence) or elements on the microarray
with the probe design using microarray layout data and design data files for summarization of
data (col. 6, lines 22-28). Figure 9 discloses a user defined query (530) where selected datasets
are retrieved and provided based on user defined selection (531) followed by comparison

(correlation) to other datasets (532/534/536/544/546) including filters to select specified elements of the dataset such as protein function (542 and col. 12, lines 11-17), ending in a viewing of the data (538). Maslyn et al. disclose a protein function menu to allow users to select elements (probes) by their associated protein function (col. 1, lines 32-34 and col. 14, lines 34-36) which represents a correlation ("establish a mutual or reciprocal relation between", definition of correlate according to the Merriam-Webster online dictionary) between the microarray gene element data with the protein data.

Applicants state that the filtering steps in the Maslyn et al. reference and the correlation of the instant invention are different. The remaining entities in a filtering process indicate some relation or correlation based on the essence or characteristics of the filtering process. Applicants assert the filtering components are independent of the output process. This statement is found unpersuasive as Maslyn et al. disclose general output with an output manager in the general process discussed and figures (i.e. Figure 2) shows how results are outputted onto a HTML page. Applicants state the claimed user selection of probe-set identifiers differs from the user defined query criteria used by Maslyn et al. This statement is found unpersuasive as the claimed user selection can be interpreted broadly to include Maslyn et al.'s user selection. Applicants state the claimed user selection of probe-set identifiers represents data to be acted upon and not the method of acting or rules to be applied by such a method. This statement is found unpersuasive as such limitations to user selection are not found in the instant claims. Applicants state that Maslyn et al. do not describe the claimed user selection of probe set identifiers based on results of experiments and multiple correlation steps. This statement is found unpersuasive as the hybridization results of microarrays in Maslyn et al. represent experiment results and multiple correlation steps are disclosed as well (see rejection above). Applicants state Maslyn et al. do not disclose two consecutive correlation steps or a viewer tool. This statement is found

unpersuasive as the instant claims do not state that the correlation steps need be consecutive or

the presence of a viewer tool. Applicants' arguments are found unpersuasive.

Conclusion

No claim is allowed.

Applicant's amendment necessitated the new ground(s) of rejection presented in this

Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a).

Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE

MONTHS from the mailing date of this action. In the event a first reply is filed within TWO

MONTHS of the mailing date of this final action and the advisory action is not mailed until after

the end of the THREE-MONTH shortened statutory period, then the shortened statutory period

will expire on the date the advisory action is mailed, and any extension fee pursuant to 37

CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event,

however, will the statutory period for reply expire later than SIX MONTHS from the date of this

final action.

Papers related to this application may be submitted to Technical Center 1600 by facsimile

transmission. Papers should be faxed to Technical Center 1600 via the PTO Fax Center. The

faxing of such papers must conform with the notices published in the Official Gazette, 1096 OG

30 (November 15, 1988), 1156 OG 61 (November 16, 1993), and 1157 OG 94 (December 28,

1993) (See 37 CFR §1.6(d)). The Central Fax Center number for official correspondence is

(571) 273-8300.

Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Carolyn Smith, whose telephone number is (571) 272-0721. The

examiner can normally be reached Monday through Thursday from 8 A.M. to 6:30 P.M.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Ardin Marschel, can be reached on (571) 272-0718.

Any inquiry of a general nature or relating to the status of this application should be

directed to Legal Instruments Examiner Tina Plunkett whose telephone number is (571) 272-

0549.

MARJORIE A. MORAN
PRIMARY EXAMINER

March 14, 2005